

AMENDMENTS TO CLAIMS

Claims 1, 8, 11, 14, 17, 24, 30 and 31 are currently being amended. Claims 3, 10, 19, 26, 33 are being canceled (claims 2, 12, 15, 16 and 18 were previously canceled). New claims 34 and 35 are being added. All pending claims are reproduced below, including those that remain unchanged.

1. (Currently Amended) A computer implemented method for preparing a job for execution by a batch job execution system, comprising the steps of:

receiving a job from an external source, wherein the job includes a plurality of tasks;

selecting a program, subsequent to receiving the job, which includes a first part and a second part, which may be used in executing the job;

preparing a batch job by associating the selected program with the job; and,

transmitting the batch job toward the batch job execution system;

wherein the first part of the program includes a plurality of steps, wherein each step identifies a service which is offered by the batch job execution system which can be used in executing at least a portion of one of the tasks of the batch job; and

~~information about data dependencies between the steps, so that the batch job execution system can determine whether an output of one of the tasks associated with a first one of the steps is needed as an input for a second one of the steps, and thus whether the second step can be started before the first step~~

wherein the second part of the program is for executing at least a portion of one of the tasks of the batch job; and, is further capable of generating additional steps to be executed by the batch job execution system in order to complete the task being executed, wherein each additional step identifies a service which is offered by the batch job execution system which can be used in executing at least a portion of one of the tasks of the batch job.

2. (Canceled)

3. (Canceled)
4. (Original) The method of claim 1, wherein the program is selected from a plurality of programs stored in a library, wherein the programs are capable of being executed by the batch job execution system.
5. (Original) The method of claim 1, further comprising the step of, receiving a signal from the external source designating the program to be selected.
6. (Original) The method of claim 1, further comprising the steps of:
receiving a first signal from the external source, which identifies the input type of information included in the job;
receiving a second signal from the external source, which identifies the desired output type of information to be obtained when the job has been executed; and,
wherein the step of selecting a program is in response to receiving the first and second signal.
7. (Original) The method of claim 1, further comprising the steps of:
determining the input type information included in the received job;
receiving a signal from the external source, which identifies the desired output to be obtained when the job has been executed; and,
wherein the step of selecting a program is in response to the steps of determining and receiving.
8. (Currently Amended) A computer implemented method for preparing a batch job for execution by a batch job execution system, comprising the steps of:
receiving a batch job comprising a plurality of tasks, by a first part of the batch job execution system, wherein the batch job may be executed using a plurality of service providers;

determining for the tasks of the batch job a service type, offered by a service provider of the batch job execution system, which may be used for performing the task;

creating a at least one step for each task of the plurality of tasks, wherein the steps comprise a first reference to the determined service type needed to perform the task, and a second reference to the task;

determining an efficient way to organize the created steps for execution by the batch job execution system;

preparing a program which comprises the created steps, and the organization of steps for execution by the batch job execution system; and,

transmitting the batch job and the prepared program toward a second part of the batch job execution system;

wherein the prepared program is for, executing at least a portion of one of the tasks of the batch job; and, is further capable of generating additional steps to be executed by the batch job execution system in order to complete the task being executed, wherein each additional step identifies a service type which is offered by a service provider of the batch job execution system which can be used in executing at least a portion of one of the tasks of the batch job.

9. (Original) The method of claim 8, wherein the step of determining a service type further comprises the step of, referencing a provider matrix, wherein the provider matrix comprises:

a list of services which are capable of being performed by the batch job execution system; and,

a list of service providers which are capable of performing the services.

10. (Canceled)

11. (Currently Amended) A computer implemented method for preparing and executing a task of a batch job by a batch job execution system, comprising the steps of:

receiving the task of the batch job which is to be executed by a service provider;

making a call to start a session with a remote platform, in response to receiving the task;

making a call to put, subsequent to making a call to start a session, which transfers at least a portion of the information in the task to be executed to the remote platform;

making a call to convert, subsequent to making a call to put, which instructs the remote platform to perform a function on the information transferred to the remote platform;

making a call to get, subsequent to making a call to convert, which retrieves the converted information from the remote platform;

repeating each step of making a call to put, convert and get until the task is completed; and,

making a call to end the session with the remote platform;

wherein each of the above steps are performed by the service provider; and

wherein the step of making a call to start a session further comprises creating a unique address which identifies the session; and the step of making a call to end the session terminates the unique address.

12. (Canceled)

13. (Original) The method of claim 11, wherein the remote platform is operating on a Windows based machine; and the service provider is operating on a UNIX based machine.

14. (Currently Amended) A computer implemented method for preparing and executing a task of a batch job by a batch job execution system, comprising the steps of:

receiving at a first service provider of the batch execution system, the task to be executed from a job management apparatus of the batch job execution system;

in response to receiving the task from the job management apparatus, creating a plurality of steps at the first service provider which must be executed by a plurality of other service providers in order to complete the task;

transmitting the plurality of steps to be completed, from the first service provide toward the job management apparatus of the batch job execution system for execution, so that the job management apparatus can distribute the plurality of steps to a plurality of other service providers that will execute the plurality of steps;

receiving at the first service provider a plurality of results from the job management apparatus of the batch job execution system once the plurality of steps have been executed by a plurality of other service providers; and,

preparing at the first service provider an output comprising the plurality of results.

15. (Canceled)

16. (Canceled)

17. (Currently Amended) An apparatus for preparing a job for execution by a batch job execution system, comprising:

a client, which is capable of receiving a job from an external source, wherein the job includes a plurality of tasks, wherein the client is for:

selecting a program which comprises a first part and a second part, wherein the program may be used in executing the job;

preparing a batch job by associating the selected program with the job; and,

transmitting the batch job toward the batch job execution system;

wherein the first part of the program includes a plurality of steps, wherein each step identifies a service which is offered by the batch job execution system which can be used in executing at least a portion of one of the tasks of the batch job; and

~~information about data dependencies between the steps, so that the batch job execution system can determine whether an output of one of the tasks associated with a first one of the steps is needed as an input for a second one of the steps, and thus whether the second step can be started before the first step~~

wherein the second part of the program is for executing at least a portion of one of the tasks of the job; and, is further capable of generating additional steps to be executed by the batch job execution system in order to complete the task being executed, wherein

each additional step identifies a service which is offered by the batch job execution system which can be used in executing at least a portion of one of the tasks of the job.

18. (Canceled)

19. (Canceled)

20. (Original) The apparatus of claim 17, wherein the program is selected from a plurality of programs stored in a library, which are capable of being executed by the batch job execution system.

21. (Original) The apparatus of claim 17, wherein the client is further for, receiving a signal from the external source designating the program to be selected.

22. (Original) The apparatus of claim 17, wherein the client is further for:
receiving a first signal from the external source which identifies the input type of information included in the job;
receiving a second signal from the external source which identifies the desired output type of information to be obtained when the job has been executed; and,
selecting a program based on the first and second signal, which includes information necessary for executing the job.

23. (Original) The apparatus of claim 17, wherein the client is further for:
determining the input type information included in the received job;
receiving a signal from the external source which identifies the desired output to be obtained when the job has been executed; and,
selecting a program based on input type and the desired output, which includes information necessary for executing the job.

24. (Currently Amended) An apparatus for preparing a batch job for execution by a batch job execution system, comprising:

a service provider, for:

receiving a batch job comprising a plurality of tasks, wherein the batch job may be executed using a plurality of service providers:

determining for the tasks of the batch job a service type, offered by a service provider of the batch job execution system, which may be used for performing the task;

creating a at least one step for each of the plurality of tasks, wherein the step comprises a references to the determined service type needed to perform the task, and a reference to the task;

determining an efficient way to organize the created steps for execution by the batch job execution system;

preparing a program which comprises the created steps; and the organization of the steps for execution by the batch job execution system; and,

transmitting the batch job and the prepared program toward a job management apparatus;

wherein the prepared program is for executing at least a portion of one of the tasks of the batch job, and is further capable of generating additional steps to be executed by the batch job execution system in order to complete the task being executed.

25. (Original) The apparatus of claim 24, wherein the service provider references a matrix, wherein the matrix comprises:

a list of services which are capable of being performed by the batch job execution system; and,

a list of service providers which are capable of performing the services.

26. (Canceled)

27. (Previously Presented) An apparatus for preparing and executing a task of a batch job by a batch job execution system, comprising:

a service provider, which is capable of receiving the task of the batch job which is to be executed wherein the service provider is for:

making a call to start a session with a remote platform, in response to receiving the task;

making a call to put, subsequent to making a call to start a session, which transfers at least a portion of the information in the task to be executed to the remote platform;

making a call to convert, subsequent to making a call to put, which instructs the remote platform to perform a function on the information transferred to the remote platform;

making a call to get, subsequent to making a call to convert, which retrieves the converted information from the remote platform;

repeating each step of making a call to put, convert and get until the task is completed; and,

making a call to end the session with the remote platform

wherein the making a call to start a session further comprises creating a unique address which identifies the session; and the making a call to end the session terminates the unique address.

28. (Original) The apparatus of claim 27, wherein the remote platform is operating on a Windows based machine; and the service provider is operating on a UNIX based machine.

29. (Original) An apparatus for preparing and executing a task of a batch job by a batch job execution system, comprising:

a service provider, which is capable of receiving the task to be executed from a job management apparatus, wherein the service provider is for:

creating a plurality of steps which may be executed by a plurality of other service providers in order to complete the task;

transmitting the plurality of steps to be completed toward the job management apparatus for execution;

receiving a plurality of results from the job management apparatus once the plurality of steps have been executed; and,
preparing an output comprising the plurality of results.

30. (Currently Amended) An article of manufacture including an information storage medium wherein is stored computer readable information comprising:

a client software component for:

receiving a job from an external source, wherein the job includes a plurality of tasks that may be executed using a plurality of service provider software components;

selecting a program software component which references at least one of the plurality of service provider software components;

preparing a batch job software component by associating the selected program software component with the job; and,

transmitting the batch job software component toward a job management apparatus software component;

wherein a first part of the program component includes a plurality of steps, wherein each step identifies a service which is offered by the batch job software component which can be used in executing at least a portion of one of the tasks of the job; and

~~information about data dependencies between the steps, so that the batch job software component can determine whether an output of one of the tasks associated with a first one of the steps is needed as an input for a second one of the steps, and thus whether the second step can be started before the first step~~

wherein a second part of the program component is for executing at least a portion of one of the tasks of the job; and, is further capable of generating additional steps to be executed by the batch job software component in order to complete the task being executed, wherein each additional step identifies a service which is offered by the batch job software component which can be used in executing at least a portion of one of the tasks of the job.

31. (Currently Amended) An article of manufacture including an information storage medium wherein is stored computer readable information comprising:

a service provider software component, which offers a service of conversion planning, wherein the service provider software component is for:

receiving a batch job software component;

separating the batch job software component into a plurality of tasks, wherein the tasks may be performed by a service provider software component of a batch job execution system;

determining for each of the plurality of tasks a service type, offered by one of the service provider software components, which may be used for performing the task;

creating a at least one step for each of the plurality of tasks, wherein the steps comprise a references to the service type needed to perform the task and a reference to the task;

determining an efficient way to organize steps for execution by the batch job ~~execution system~~ software component;

preparing a program software component, which comprises the steps and information designating the organization of the steps for execution by the batch job ~~execution system~~ software component; and,

transmitting the batch job software component and the program software component toward a job management apparatus;

wherein the program software component is for, executing at least a portion of one of the tasks of the batch job software component; and, is further capable of generating additional steps to be executed by the batch job software component in order to complete the task being executed, wherein each additional step identifies a service type which is offered by the batch job software component which can be used in executing at least a portion of one of the tasks of the batch job software component.

32. (Previously presented) The article of manufacture of claim 31, wherein the service provider software component, which offers the service of conversion planning, references a provider matrix software component which comprises:

a list of services which are capable of being performed by the batch job execution system; and,

a list of service provider software components which are capable of performing the services.

33. (Canceled)

34. (New) The method of claim 1, wherein the first part of the program also includes:

information about data dependencies between the steps, so that the batch job execution system can determine whether an output of one of the tasks associated with a first one of the steps is needed as an input for a second one of the steps, and thus whether the second step can be started before the first step.

35. (New) The apparatus of claim 17, wherein the first part of the program also includes:

information about data dependencies between the steps, so that the batch job execution system can determine whether an output of one of the tasks associated with a first one of the steps is needed as an input for a second one of the steps, and thus whether the second step can be started before the first step.